

## FANG (ROSEANNE) ZHAO

NIH-Cambridge Scholar 2007

Degrees: University of Chicago, B.S. Mathematics, B.A. Chemistry, 2007

Research Area: Immunology; Molecular Biology



Fang “Roseanne” Zhao graduated with honors from the University of Chicago at age 19 with a B.S. in Mathematics, a B.A. in Chemistry, and a minor in Physics. She is an active member of the Sigma Xi Honorary Society, and is working under the guidance of Dr. Pamela Schwartzberg and Professor Gillian Griffiths in researching CD8<sup>+</sup> cytolytic defects in primary immunodeficiencies. Prior to joining the program, she worked for several years in Professor Daphne Preuss’ *Arabidopsis* plant biology lab, studying the function of the extracellular lipase (EXL) genes in pollination. Her research in that lab has allowed her to gain “important insights into working in a research laboratory, the importance of scientific collaboration, as well as the dedication necessary to achieve research objectives.” In addition to the research in Dr. Preuss’s lab, Roseanne also worked on an independent study of quantum dynamics with application to molecular reactions. This research resulted in the development of a mathematically rigorous analysis of the complex scaling parameter for the Rigged Hilbert Space theory, as well as various applications to one- and multi-dimensional dynamics systems. Roseanne’s research in biology and mathematics has led to several scientific publications to date. Roseanne has also participated in various leadership activities, including serving as an officer in PHOENIX (the biological sciences students’ organization), director of the PHOENIX Mentoring Program Committee, director of publicity for the math club, and an elected house representative for her student dormitory. Roseanne spent the summer of 2005 at The University of Chicago’s VIGRE and REU Program, which integrates research and education, where she worked as a student, a researcher, and a teacher in applied mathematics. In her research, Roseanne strives to become a role model, to work on research and discovery for the benefit of society, and to help stimulate scientific interest and understanding in the general public.